

H.A

Notice of Allowability

Application No.

10/680,101

Examiner

Eugene Lee

Applicant(s)

TOMIYE ET AL.

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/25/05.
2. ☒ The allowed claim(s) is/are 1-29.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


EUGENE LEE
AU 2815

DETAILED ACTION

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claims 30-36, previously withdrawn from consideration for being drawn towards a non-elected invention, have been cancelled.

Allowable Subject Matter

2. Claims 1 thru 29 are allowed.
3. The following is an examiner's statement of reasons for allowance: The references of record, either singularly or in combination, do not teach or suggest at least a semiconductor device comprising: a first memory cell transistor constituting a part of a memory cell in an SRAM, and fulfilling an expression such as the thickness of the first semiconductor layer \leq one-third of a length of the first gate electrode in its channel length direction; a first peripheral transistor constituting a part of a peripheral circuit (claims 1-12, and 25- 28).

Regarding claims 13-24, the references of record, either singularly or in combination, do not teach or suggest at least a semiconductor device comprising: a first memory cell transistor constituting a part of a memory cell in an SRAM, and fulfilling an expression such as the thickness of the semiconductor layer \leq one-third of a length of the first gate electrode in its

channel length direction; and a first peripheral transistor constituting a part of a peripheral circuit.

Regarding claim 29, the references of record, either singularly or in combination, do not teach or suggest at least a semiconductor device comprising: a first memory cell transistor constituting a part of a memory cell in an SRAM and having a first gate electrode and first source/drain diffusion layers, the first gate electrode being provided on a gate insulating film which is provided on the first surface, on the second surface and on the third surface of the first semiconductor layer, the first source/drain diffusion layers sandwiching a region enclosed by the first gate electrode in the first semiconductor layer; a second semiconductor layer; and a first peripheral transistor constituting part of a peripheral circuit, having a third gate electrode, and fulfilling an expression such as the thickness of the second semiconductor layer $>$ one-third of a length of the third gate electrode in its channel length direction. Hisamoto et al. JP 02263473 A discloses a thin film transistor comprising a semiconductor layer almost vertical, however, Hisamoto does not disclose that the memory cell transistor having the vertical semiconductor layer, and a peripheral circuit fulfilling an expression such as the thickness of the second semiconductor layer $>$ one-third of a length of the third gate electrode in its channel length direction.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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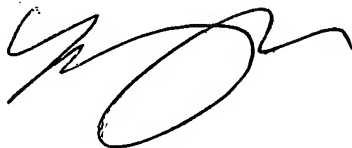
INFORMATION ON HOW TO CONTACT THE USPTO

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Lee whose telephone number is 571-272-1733. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on 571-272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eugene Lee
May 16, 2005



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